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A Magazine for Teachers

Understanding The Child

MENTAL TESTS

What Are Mental Tests and What Do They Test?
E. STANLEY ABBOT

Evolution of Educational Measurement
WILLIAM A. McCALL *and* AMY J. DE MAY

The Child, the Test, and the Tester
GUY M. WILSON

How to Use Group Tests of Intelligence
WALTER F. DEARBORN

Why Children Fail in Reading — WILLIAM S. GRAY

Case Study — WILLIAM L. YOUNG

Alfred Binet — EDOUARD CLAPARÈDE

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UNDERSTANDING THE CHILD

A Magazine for Teachers

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Understanding The Child

A Magazine for Teachers

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TESTS AND MEASUREMENTS AS TEACHING TOOLS

CRITICS of formal philosophy used to say, "It bakes no bread," meaning that it had no practical value, that it did not influence human life. Today as we survey the hundreds of tests that are on the market, we are tempted to use the same figure of speech and ask, "Do they bake bread? Are they really useful? If so, how? As teachers we insist that they should in some way help the child, if they are to command our enthusiastic support."

It seems only yesterday that the Binet-Simon tests were brought to America. They were the first of an impressive procession. They excited great interest and some merriment. To many it seemed ridiculous that any child in the course of an hour or so could be so accurately classified as to intelligence through what seemed to be an absurd test. Yet, in spite of ridicule and misunderstanding, psychologists and educators gradually came to see that there is something in such tests. Their concreteness and accuracy appealed to the American mind. They were improved and new tests organized until today there are tests for many mental and social activities. The best psychologists believe that tests and measurements are still in the process of development but that most of those already devised, when properly used and interpreted, are useful tools. They have come to stay.

It is frequently assumed that educational tests and measurements represent a new movement in education. This is not true. Teachers have always tried to test and measure their product. What they once attempted to do crudely is now carried on in a more scientific way. A generation ago all teachers used class periods for testing and measuring. The old-fashioned spelling class was a good example. The children often marched to class in military order and stood with their toes on a particular crack or chalk mark. Then they started to spell. If a pupil failed, the successful speller passed above him. One's place in the line measured one's spelling accomplishment. All formal recitations and examinations are forms of testing and measuring.

The scientific movement of testing and measuring helps the teacher to answer at least three important questions:

1. What may I reasonably expect of each pupil?
2. Where do they have special difficulties?
3. How may I teach more effectively?

Probably every teacher will agree that one of the major educational problems of education is to know just what her pupils are capable of doing and to adjust the school work to the capacities of the learner. It is not only futile and stupid to try to teach children what they cannot learn but it also promotes a mental maladjustment which may be serious. Mental tests help us to know about the learning capacities of children. Nobody has demonstrated this better than Professor Seashore in his music tests. It is possible to select those children who have talent in music and those who can never learn to sing or play a musical instrument satisfactorily. There are some children who may profit from some forms of musical instruction and others who never can. It requires little imagination to understand how instruction in music might be aided by the use of such a test. Unfortunately we do not always make use of our scientific tools. Today about one-sixth of the children who enter the first grade fail. The goal set for them is impossible. They are destined to have a melancholy start in what should be one of the great adventures of life — beginning school. Yet today scientific tests may determine with a fair degree of accuracy those who are not fitted for regular first-grade work.

There are certain tests designed to enable the teacher to discover just those points where the children fail. Miss A. has a class of forty pupils. Robert does poorly in arithmetic. This is easy to see, but it is not so easy for Miss A. to find out just where Robert's difficulties lie. She may not know how, or she may not have time, for there are thirty-nine other pupils besides Robert, and other subjects to teach besides arithmetic. A diagnostic test in arithmetic, which may be given to the entire class, may show her that Robert has trouble with certain combinations in addition. This shows her where not only Robert but perhaps other members of the class need special drill. Such a test has become a very practical tool.

To understand children's capacities and their special difficulties in learning makes possible a more vital kind of teaching. Tests show that Tom has a very poor discrimination in pitch. We shall not try to teach him music but turn his energies into other lines in which he may succeed. Polly has marked musical talents. We shall encourage it as best we can. Frank has the general intelligence to learn mathematics but his failures are due to a lack of mastery of certain combinations in arithmetic. He needs drill on those combinations. The case study of reading disability by Mr. Young in this number of the magazine illustrates concretely how various reading tests may help the teacher to understand a child's problems and thereby teach better. Every number of UNDERSTANDING THE CHILD illustrates the importance of tests and measurements as aids to child guidance and teaching.

The distinguished contributors to this issue are all agreed that tests and measurements are valuable tools for the teacher but that they should be used by experts and interpreted cautiously. Tests are only one means of understanding the child. Any worth-while interpretation should be based on all the facts about the child that are available.

PERSONALITY TESTS

An Editorial

THE whole child goes to school." This is usually said in criticism of earlier attitudes of educators who thought little about the child's health, his feelings, or his desires, but regarded him as a receptacle for information and a plastic subject to be molded to a pattern.

Sometimes the phrase is used to emphasize the fact that the child has *needs* — needs for good health, for "emotional outlets," for "self-expression," — and that these, as well as the intelligence, should be the concern of the teacher.

Occasionally it is said to call attention to other abilities and traits besides intelligence, such as feelings and emotions, likes and dislikes, desires, attitudes, ambitions, standards of behavior, and so on, which teachers should consider.

Are not all these traits parts of the child's personality? Can any be left out? None are shed as he enters the schoolroom. They are parts of him as he sits in his seat, as he studies, as he recites, as he goes from room to room, as he plays. They all have more or less effect on all that he does, whether in recitation, in intelligence tests, on the playground, on the streets, at home, or wherever else he may be.

What then is the personality?

There are almost as many answers as there are writers on the subject. To some it is "the individual in action," or "the sum-total of all the reaction-patterns of the individual." To some it is character; to others it is "the effect one has on other people." One defines it as "the entire mental organization of a human being at any stage of his development," while another particularizes it further as including "intelligence, instinct, sentiment, motor control, all sets or patterns or determining tendencies, all habits, all memories, all that from which the organism is consciously or unconsciously governing or conditioning its behavior." To the last two definitions the present writer would add physical build and state of health. Personality includes all that one is and has been.

Under this conception one's personality is always changing in some particulars, especially before maturity. Each new experience, each contact with the environment, adds to one's memories. It may change one's ideas, one's habits, one's feelings, one's likes or dislikes, one's desires, one's attitudes, one's sentiments, one's various abilities, one's physical state, even one's intelligence. Yet much remains so nearly the same that we regard ourselves and are regarded by others as the same person, if not quite the same personality.

Can personality then be tested, measured, or rated when there are so many traits of such different kinds?

For ages writers have described individual personalities, but not according to any common or comparable system. Only since the turn of the century have any systematic efforts been made to test, describe, or rate the personality as a whole by means of common scales or measuring rods. One, with ninety-odd questions, arranged under fourteen general heads, to be answered in a way to give a rough scale of values, is the most comprehensive. This and most other tests and rating scales — from ink-blots to three-hundred-item questionnaires — are used chiefly for clinical purposes. Less comprehensive tests or rating scales have been devised for selecting or rating the personnel in factories, offices, schools and other work-places, noting other traits than special abilities or skills. All these, however, are for adults. Few are useful before the college years. A great many separate tests or scales for special personality traits, as will-temperament, ethical discrimination, special interests, and so on, are used. All, however, are in a more or less experimental stage at the present time and are of only limited use to teachers.

WHAT IS YOUR ANSWER?

The following questions are answered in this number of UNDERSTANDING THE CHILD. *They are intended to help the reader grasp the important points in the text. Do you approve of this plan? Should it be continued? Please drop the Editor a card at 3 Joy Street, Boston, Mass.*

To verify your answer, turn to the page or pages whose numbers are given in bold type after each question.

1. *a.* What is a test? **5, 6**
   b. What is an intelligence test used for and what are its limitations? **7, 25**
   c. What is an achievement test used for and what are its limitations? **7, 9**
2. Who should give tests? Why? **11, 14**
3. What kind of personality should the tester possess? Why? **11, 14**
4. How may a child's environment affect the results of an intelligence test? **12**
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    c. What practical situation led him to invent his famous scale of intelligence? 23
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14. *a.* What were the findings in the case of reading disability? **19, 20**
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WHAT ARE MENTAL TESTS AND WHAT DO THEY TEST?

By E. STANLEY ABBOT, M.D.

Associate Editor, "Understanding the Child"

Why are the results of mental testing usually superior to personal judgments? What do tests really tell? What do they fail to tell? These are some of the important questions that Dr. Abbot considers in the following article.

IN A broad sense every situation and every event which one notices is a mental test. Some change is taking place in one's surroundings, something is happening, almost every minute, wherever one is, whether at home, on the street, in the school, the store, the office, the factory. If one notices it, one has something, sensible or foolish, to do about it, even if it is nothing more than to dismiss it from one's mind and pay no more attention to it. One has had at least to make the decision that it was of no importance and to go on with what one was doing. And even that has required mental action.

Except when one acts merely automatically, or habitually, or instinctively, or impulsively, the mental actions that one has to perform include understanding the situation or event, judging its importance and perhaps its consequences, thinking or seeing or planning what is the best or the necessary, or the appropriate, or the sufficient thing to do, resolving to do it, and then directing one's motor and mental activities to doing it—or doing something else. That is, they include some reasoning about it, and reasoning includes recalling past experiences and ideas (whether formed by oneself, or derived from others or from books) that have some relation to the situation or event. These mental actions may be performed more or less well or ill; the thoughts and ideas one recalls may be appropriate or not; the thing one does may be appropriate and effective or otherwise.

Therefore, since most persons want to do fairly well, and try most of the time to be fairly efficient in most, if not all, of the things they do, each event becomes a test of how efficient they are, and hence of how well they can use their mental powers and abilities and their mental content—that is, their experiences and acquirements—in making their adjustments to it. If they have good abilities and use them and their experiences well and effectively, we call them sensible or intelligent, we say they acted sensibly or intelligently, or that they have good sense or intelligence. If they do poorly, we say they are foolish or unintelligent, in varying degrees. For a great many purposes we want to know how intelligent some persons are, especially children, and how they compare with others. We also want to learn, especially of pupils in schools and colleges, what knowledge they have, how extensive this knowledge is, and how well they can use it.

How do we judge how intelligent children — or others — are?

Most of us adults regard ourselves as good judges of other persons' intelligence and character — their "personality." But each one's judgment of another can be based only on what one has seen of the other (his appearance, what he has done in one's presence), what one has heard or read about him, what one has thought, inferred, and imagined about him, and especially on what emotions and feelings one has had about and toward him. This last is very important and is usually overlooked. Our judgments are influenced far more than we like to believe by our feelings and emotions! Though there may be a certain amount of agreement among many persons' judgments concerning some individuals, as Charles A.

Lindbergh, there are wide differences about others, as for example, Woodrow Wilson. Do not even classroom teachers differ quite widely about some one child whom they have all seen and taught daily in school?

Leaving out of account the feelings — the attractions or repulsions, the prejudices or fondnesses — which people may have for others, the chief causes for differences in judgments lie in the facts that any one person's judgment is based on too few data; that different persons' judgments are based on data which are partly, perhaps largely, different and which are therefore not comparable; and that different persons set different values on the same data. Binet showed this in an interesting experiment in which he got three teachers to examine five children each and estimate their intelligence; no two used the same methods or presented comparable situations or problems to the pupils.

Thus, in ordinary life, situations and events are not uniform, the facts on which our judgments are based are not uniform, our criteria for making our judgments are not uniform. To meet this difficulty standardized situations have been devised, with standardized tasks, standardized criteria for evaluating or scoring the performance of them, and standardized methods of treating the results, i.e. making the judgments as to intelligence. These are the intelligence tests, of which there are several. The most comprehensive and most widely used in this country is the Terman or Stanford revision of the Binet-Simon test, usually called the Binet test, for short.

Historically, this test arose as follows. Half a century ago laboratory experiments had been begun to test such individual traits as acuity of sensation, quickness of motion, and many others, which were thought to correlate with intelligence. Well over thirty years ago Binet began to insist that a much greater variety of tests was needed, that they should include tests of the higher mental functions, that they should be of graded difficulty, and, of course, as in any experiment, that the test situations should be as uniform for each item as possible. From then until his death in 1911 he set himself the problem of developing such a scale. He gradually built up and tried out on children of different ages and of different degrees of intelligence a series of test-problems or "stunts." Some of these stunts were based on what he saw children actually doing at play or work. Some were kept over from the earlier types of test. Some were scholastic tests. Some were of his own or others' devising. Some were included because they could be easily scored. Many were tried and discarded.

By a process of trial, elimination, and selection he finally made a graded scale composed of five stunts for each year of age, from 3 years to 15 years and an "adult" set (omitting sets for ages 11, 13, and 14). Each stunt was selected on the basis that from about a half to eight- or nine-tenths of normal children of those ages could perform it. By finding how many stunts the child could do, and in what years these stunts belonged, he was able to correlate the child's stage of mental development with his success in the tests, and assign him a "mental age."

Terman adapted this scale with some alterations and additions to American children. He added a sixth stunt to each year's set and added a set for the age of 18 years or "superior adult." Also, with the coöperation of others, he tried the tests out on so many individuals that the averages are fairly uniform and statistically valid.

When a child is to be tested, standardization of the test-situation requires that the child be alone with the tester (except in the case of group tests); that the atmosphere be one of cordial friendly interest and coöperation; that the child be stimulated and encouraged to do his best; that he be in no way helped by the tester by expression, hint, or word; and especially that he be not criticized or corrected, whatever he may do. (This is a hard lesson for teachers and parents to learn, still harder to practice, for

their whole lives are spent in teaching, guiding, correcting.) The manner and words in which each stunt is put before the child are made as uniform as possible. The stunts themselves are exactly the same.

Records of the child's performance are made partly by himself, as when he draws on the record sheet a square or a diamond or shows how he would find a lost ball. But most of his responses are recorded by the tester, sometimes verbatim, sometimes by a check or mark to indicate success or failure. For some of the stunts there is no question as to success or failure, as when the child tries to repeat a given number of digits. For others, as in giving definitions, there may be room for difference of judgment. Effort is made, however, to standardize even these judgments, so far as possible.

The child's total credits, valued at two months each, give his "mental age" in years and months. This, correlated with his chronological age, gives his "intelligence quotient" in numbers. It seems very accurate, and in many cases it is.

But there are variables, in spite of the efforts at uniformity, that are not due to the child's intelligence and are not tested. The child's health or physical state, his emotional condition, his attitudes, the tester's inexperience, lack of tact, mannerisms, perhaps faulty judgments about some of the performances, — these are some of the factors that may affect the child's score to his disadvantage. It is only a sampling, and important factors, as special abilities and disabilities, are lost sight of. Special tests have been devised to find and measure many such factors.

Intelligence tests give a record only of what the child actually did under all the conditions of the test. They show that he was capable of doing at least as well and as much as the record indicates. They do not show how much better he might be able to do, nor set a limit beyond which he cannot develop. Often tests need to be repeated, and supplemented by tests of special abilities or disabilities or by diagnostic tests.

From them we can learn approximately whether a child has developed mentally as far as others of his age, or less or farther, and about how much. Given early in his school years, they can help to guide his future schooling more wisely; and at any time they may help to place him more advantageously in the school.

Though intelligence tests tell what a child has done in a test, and therefore what he *can* do, neither they, nor anyone, can tell what he *will* do. As Kipling says, that is another story. However, since most folk, including children, want to do pretty well, the tests have, not an absolute, but a relative, predictive value.

Besides intelligence tests, just described, there are innumerable other mental tests by use of which we can learn much about children and others. Perhaps the scholastic achievement tests or rating scales, of quite recent development, would interest teachers especially. Like written examinations or recitations, they are chiefly tests of what has been learned, but they also have more of the characteristics of specially devised tests.

The characteristics which distinguish all special tests from the wholly haphazard situations and events of life are that the test-situation, the test-problem, the criteria for judging the result, and the correlation of the results obtained with other data are much more uniform or standardized, and there are relatively fewer variables which are not accounted for. Not one, however, is free from possibilities of error, and some of these are far larger than those who devised the tests like to admit. Furthermore, no special test, even the most comprehensive, measures more than a very limited part of the child. There is temptation to judge the whole child by too few tests.

Even to name the various tests and rating scales that have been invented would make a list longer than Homer's Catalogue of Ships — and be just as dull.

EVOLUTION OF EDUCATIONAL MEASUREMENT

By WILLIAM A. McCALL, Ph.D.

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AND

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When Dr. McCall's book "How to Measure in Education" appeared, a prominent educator exclaimed, "It reads like a poem!" The freshness and vigor of his attack marked Dr. McCall as a militant warrior in the field of tests and measurements. Within the last few years his real interest has shifted from measurement as such, psychology as such, and the like, to the fusing of many academic, isolated disciplines into one functioning pedagogic procedure. We follow him with interest as he and Miss De May sketch briefly the history of educational measurement.

WE SHALL list and briefly describe the most important steps in the evolution of scientific educational measurement.

The first important step was taken when Dr. Rice in 1894 chose a list of fifty words to compose a spelling test, and established norms or standards of accomplishment in connection with this same spelling list. Dr. Rice's chief contribution lies in the fact that for the first time the same test was applied to many groups so that the accomplishment of lower grades could be compared with that of higher ones, and the accomplishment of one school system could be compared with that of another. Norms or standards made possible also the comparison of the efficiency of different methods of instruction; and this made rough educational experimentation possible on a nation-wide basis.

The next stage was characterized by the construction of longer and, hence, more reliable tests for the measurement of individual pupils as well as groups. The fact that about this time the instructions for giving tests were standardized improved both the comparability and the reliability of test results.

One of the greatest advances in the growth of testing efficiency occurred in what we may term the third stage. Dr. Thorndike, "the father of educational measurement," developed with the assistance of Buckingham, Trabue, Woody, Kelley, and Van Wagenen, the first system of constructing scaled tests. The tests illustrative of this stage were scientifically constructed, the instructions were standardized, the test items were each assigned a scale value above a defined zero point, and norms were provided. However, the method

WILLIAM A. McCALL

of computing scale scores for pupils or classes was too involved for general use by relatively untrained educators.

The scales in handwriting by Thorndike and Ayres, and the first composition scale by Hillegas constitute a parallel development for the measurement of pupil products. These made it possible to judge a child's handwriting and composition by comparing a sample of his work with specimens on a scale. Strictly speaking, these were scaled scoring instruments rather than scaled tests. Both were handicapped by the fact that only a few experts could clearly comprehend the scale units employed and by the general incomparability of scores from test to test, scoring instrument to scoring instrument, and test to scoring instrument.

The development of educational age scales and quotients by McCall overcame these two hindrances to the wide-spread use of measurement. The age scale makes it possible to express a pupil's score on any test in the same units that are employed to express his chronological age. Dividing the pupil's educational age score by his chronological age will give his educational quotient, and similarly for reading age and reading quotient, spelling age and spelling quotient, and so on. All this made age and quotient scores on educational scales comparable with each other and with similar scores on the intelligence scales previously developed by Binet, Stern, and Terman.

The development of ratios came next. The accomplishment ratio, arithmetic ratio, reading ratio, and the like, were developed by Franzen and Monroe. With these formulae, one can determine what may be expected of a pupil in view of his intelligence, for just as the educational quotient shows whether a pupil is achieving more or less than we expect of him in view of his chronological age, so the accomplishment ratio shows whether he is achieving more or less than we expect in view of his mental age.

McCall's invention of the T-B-F scale system replaces for scientific purposes the age-quotient-ratio scale system and represents the next stage. In brief, the T score corresponds to the age score, B (brightness) to the quotient, and F (effort) to ratio.

The grade (G) scale was developed by McCall to provide a popular unit easily understood by teachers without much training in scientific measurement. A grade score of 6.5, for example, means that a pupil has the average ability of a typical sixth (6) grade pupil on February 1 (.5). The grade scale is the simplest, most meaningful, and most useful scale for the classroom teacher. Even a pupil can turn his own crude score of *number right* into a G score and compare this with the norm for his grade for the month in which the test is taken.

The grade (G) scale was first applied by McCall to an extensive list of tests in China. From China it spread to America, and at present the grade scale system is in use with more standard tests than any other scale system. "How To Classify Pupils," * a book recently published, is devoted exclusively to describing the practical educational uses of grade scores.

Survey tests, even when scaled, can do no more than show that there is a deficiency somewhere; they cannot tell what the deficiency is. Hence another stage in the evolution of standard tests was inaugurated by the formulation of reliable, diagnostic tests by which a pupil's particular needs in a subject could be definitely located.

To be most efficient, diagnostic tests should provide a continuous diagnosis that is intimately related to the material being taught, and that is integrated with the teaching process. This is not practicable with separate diagnostic tests, which are necessarily a series distinct from the teaching material, for, if used for any purpose but testing, their value for diagnosis will be destroyed. This need is met by the next very important stage in standard testing,

* *How to Classify Pupils*, by W. A. McCall and H. H. Bixler. Pp. 83. New York: Bureau of Publications, Teachers College, Columbia University. 1928. $1.25.

the invention by Courtis of the drill or practice test. Courtis with his *Standard Practice Tests* † provides practice on the various phases in the fundamental operations in whole numbers. He provides types of material on which the pupil is to be both drilled and diagnostically tested at the same time.

The next stage continues the Courtis innovation, but with an important addition. This stage is represented by the McCall-Crabbs *Standard Test Lessons in Reading.** Each of the practice lessons of this series is provided with a set of standardized grade (G) scores that tell to what school year and to what month of the school year each number right or crude score corresponds. After the pupil has been taught how to get the norm for his position in the grade, he can easily be taught first to find his G score from the table at the end of the lesson, and then compare this G score with the G norm. Thus at each lesson, the pupil as well as the teacher knows whether the work being done is up to grade. Every test is a lesson and every test is a standard test.

Thus step by step the foundation was laid for the latest development, namely a complete, interrelated program. The De-May-McCall *Rapid Survey Tests in Fractions* * may be used both as diagnostic and survey tests at one and the same time. This test is so constructed that each of the three forms may be used as a survey test and all forms together as a diagnostic test. The series is provided with G, T, and age scores and norms, so that whether the purpose of the examiner is diagnosis or survey, all the techniques are provided. Also, if desired, B and F or quotient and ratio scores may be computed.

When the *Rapid Survey Tests* show there is need for practice, the De May-McCall *Standard Test Lessons in Fractions* * provide for all practical needs. Every lesson of the thirty-six is a standard test with a G score for every possible number right. Every lesson is a diagnostic test in which the inspection of the pupil's mistakes will tell the teacher what his instructional needs are. Diagnosis in the series is continuous and is an integral part of the teaching and testing.

The *Standard Test Lessons in Fractions* provide not only for repetition of the same lesson when needed, but also for the steady advancement of those who attain the degree of success to be expected of them. Also every test lesson, besides drilling on the particular process for which it is especially arranged, provides for continuous review as well, for at the beginning of each test lesson are four review examples, put there to keep the pupil continuously working on the processes given previously.

To sum up, we have traced in rapid outline the evolution of educational measurement, showing how invention after invention has emerged, been improved upon and cumulated. Among these inventions we have listed standard tests with standard instructions, norms, a convenient and popular scale for general purposes, scale units for the measurement of brightness and effort, rapid survey tests, diagnostic tests, and practice tests where every lesson is a test and every test a standard test. Finally, we have shown how recently published standard test lessons have synthesized all of these discoveries into a complete, efficient, practical program for the improvement of instruction.

Since our allotted space is consumed, we shall merely mention some recent trends, namely, Thorndike's absolute scale, Courtis' scale of isochrons, the incorporation of standard test lessons into textbooks, the construction of tests for progressive schools, and McCall's attempts to develop tests of educational ultimates such as happiness.

Measurement is everywhere in education and in our daily lives. . . . It gets up with us in the morning and goes to bed with us at night.

— WILLIAM A. MCCALL

† *Standard Practice Tests*, by Stuart A. Courtis. New York: World Book Co.

* New York: Bureau of Publications, Teachers College, Columbia University.

THE CHILD, THE TEST, AND THE TESTER

By GUY M. WILSON, Ph.D.

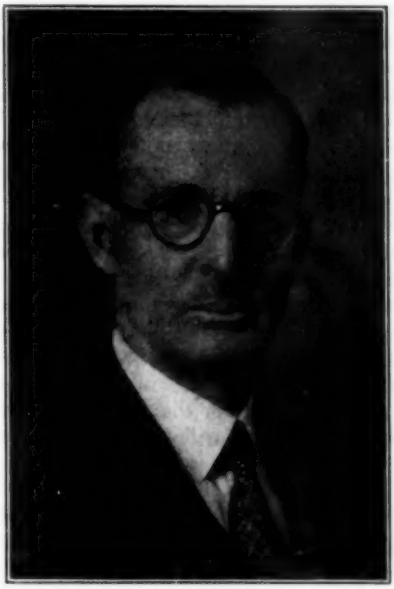
School of Education, Boston University

With a background of experience as teacher, principal, and superintendent, Professor Wilson has for ten years been teaching Educational Psychology and methods at Boston University and to extension classes throughout New England. His special field is that of tests and measurements, in which he ranks as an important investigator and writer.

TESTS were developed as a means of understanding children better and guiding them in a more effective way. They have become so popular in the last few years that testing has often become a mere fashion. It is not surprising therefore that the purpose of testing is often lost sight of, that crude tests have been used by testers who were ill prepared for their work, and that the statistical results are filed without much relation to school practice. If tests are to be considered seriously as psychological and educational tools, they should be of the finest quality and used by skillful and intelligent hands. When testing is done by the untrained person, the mistake is often made of giving them improperly and of drawing conclusions that may be wrong or are not helpful. As an example of this, we sometimes find a teacher with little or no psychological training giving a group test and then deciding on the basis of this *one* test that a boy or girl is not fitted for the advanced work of the high school. Giving a test is one thing, interpreting the results is a quite different thing; it needs an expert.

For successful testing the training and personality of the tester are of supreme importance. He should have a thorough preparation for his work in basic psychology, principles of guidance, statistical methods, achievement testing, and diagnosis, under competent guidance. His personality and attitude should inspire the confidence of the children so that they will start and carry through a test with enthusiasm.

In the actual work of testing, the child to be tested comes to the center of the stage.



GUY M. WILSON

He determines the details of approach tests to be used, meaning of background and interests, and much of the interpretation. Only the skilled tester can make the necessary adaptations to the child as the work gets under way. The child must work under favorable conditions and must be so handled as to avoid failure and discouragement. For instance, if a child has failed on item *six*, year *four*, of the Stanford-Binet, repeating four digits, it is wooden procedure to try him later on item *three*, year *seven*, repeating five digits. Signs and lines of failure must be quickly noted by the tester,

and skillful detours should follow. Since the chief purpose of testing is guidance of some sort, the child's successes are of first importance. The attitude of the tester should encourage and help the child to the successes of which he is capable.

To what extent do intelligence tests measure experience instead of intelligence? There is a difficulty here which makers of mental tests have recognized but have not fully overcome. It is easily possible, for instance, to take a city child into rural situations and discover a very low grade of intelligence with reference to those situations. Manifestly an intelligent child of six or eight years may know some things and not know others. The particular point, so far as this article is concerned, is that available test material must be used judiciously and interpreted wisely. Interests and drives that have led in other directions must be discovered. There are hundreds of tests available. The testing must continue until the child has been discovered and charted — his lines of strength, lines of interest, special knowledge, plans for the future, quality of thinking, courage, will power, permanence of decisions, and so forth.

The importance of this is well illustrated by the case of a girl in the tenth grade who had been sent to the Judge Baker Foundation because the ordinary routine of high school did not meet her needs and she had become a difficult problem. At the clinic, testing and consultation continued through the greater part of three days, about fifty different general and special tests being applied. The sequel was the finding of her interests and ability, and advice on special schooling, which led to a job and happiness.

The time should come when every teacher will be able to do preliminary work in testing and guidance and even make the necessary diagnosis in all but exceptional cases. That time has not come. It is approaching through raising entrance requirements to the teaching profession, through the provision in normal schools and schools of education of more and better courses in psychology, testing, remedial work, and guidance. Much remains to be done also in applying the principles of child psychology and mental hygiene to the ordinary activities and management of the schools. Pressure for the mastery of useless subject-matter makes many "cases." Most "confusions" in reading, arithmetic, and so forth, are teacher-induced. The natural process of learning should have an opportunity to function.

Many achievement tests are loaded with discouragement for the child because of the pressure applied to the mastery of traditional and useless items.* In such cases the tables should be turned and the questions directed to the teacher and course of study requirements, as for example:

Are the first- and second-year pupils subject to systematic drill for the mastery of arithmetic facts?

Is little attention given to meaning, motivation, and extension of experience?

Does the third-grade work in arithmetic impose an impossible load which practically guarantees confusion and discouragement, e.g., addition finished, subtraction finished, multiplication to 12 x 6, short division to the limits of multiplication, addition and subtraction of simple fractions, Roman numbers to L or C, long division begun?

In too many cases the answers are *yes* to all of these questions, and tests given go to the same limits. Such tests cannot be condemned too strongly. They represent a barbarous procedure, outlawed by good pedagogy, outlawed by child psychology and mental hygiene.

Obviously a testing program can be inexcusably bad. It can fail of all legitimate purposes. There is doubtless more harm than good in the achievement tests of the

* See "Critical Examination of a Standardized Spelling Test," by Guy M. Wilson and A. Rebecca Parsons. *Educational Administration and Supervision*, 15: 494–498, October, 1929; also "Scrutinizing a Testing Program," by Guy M. Wilson. *Ibid.*, 18: 321–326, May, 1932.

past ten years and the manner of their use, although there are some very useful achievement tests. Group intelligence tests have also been poorly constructed and poorly used. Individual intelligence tests have done better for several reasons. In the first place, they are few in number and these few have been more carefully constructed. In the second place, individual intelligence tests are usually administered by those who are trained to understand their significance. In other words, when the trained expert does the testing, he secures the benefits and eliminates the mistakes, exactly as the trained surgeon handles a major operation. Testing is more than statistics, just as surgery is more than sharpening the instruments.

Some concrete examples may serve to show the purposes and value of a sane testing program. The following cases are especially interesting since they refer to children who have an I.Q. above the average. A bright-appearing girl could not add, and was given an intelligence test. Her I.Q. was 134, which marked her as a gifted child. In her case, inventory testing in arithmetic was dispensed with, and the girl was given my Addition Drill Service. She was bright enough to comprehend the plan quickly and asked to borrow the drill service. In less than two weeks she had mastered every primary and decade fact (not already known) needed for addition, and was very proud of the fact that she could solve any example in addition.

My measurement class discovered recently in the Cambridge schools a boy in a special class, whose average I.Q. on five group intelligence tests was 128. The boy had accepted the decision of his teachers that he was dull, although previously no tests had been given him, and was preparing to give up plans for high school and college. Study of the case disclosed the fact that disciplinary procedures had placed the boy in this special class of supposedly low I.Q.'s or dullards. The tests provided evidence on which to restore the boy to a regular group. He has since entered high school, where his successes have been above the average.

My colleague, Dr. Donald Durrell, reports a case from our educational clinic which illustrates the need for adapting the testing to the child's problem. A fourth-grade child was three years retarded in reading. When intelligence tests were corrected for this deficiency, the girl showed a high I.Q. But how account for the deficiency? In addition to many faulty habits and confusions in beginning reading, it was found that the child could not understand the meaning of things read to her. Socially ambitious parents had left her in the care of a governess who kept her so close in the nursery that her vocabulary was that of a seven-year-old. Only the expert in clinical practice could have solved this problem. An unusual treatment was necessary. It consisted in finding an older companion who took the child out for experience, to church, to the store, to the bank where a savings account was opened, to Boston for a shopping trip, to the kennels to buy a pup for her very own, and so on.

The testing movement has provided many useful tools, but the tools themselves are not fool-proof. So many possibilities of error exist that it is sound to recommend testing only under expert guidance. Otherwise, the best single guide is the success and happiness of the child. Any normal child can learn to read, with proper methods. Any normal child can be led to one hundred per cent mastery of the essentials of arithmetic. Any child can succeed in spelling, if the load is properly adjusted to needs and ability. If the teacher avoids pressure, if she follows the children's leads, capitalizing and making significant the experiences that do result, if she keeps the children busy, successful and happy, few "cases" will develop. When they do, the expert should be called upon for help.

In the study of any difficult case, or in any problem of adjustment and guidance with normal children, tests will be found an invaluable aid.

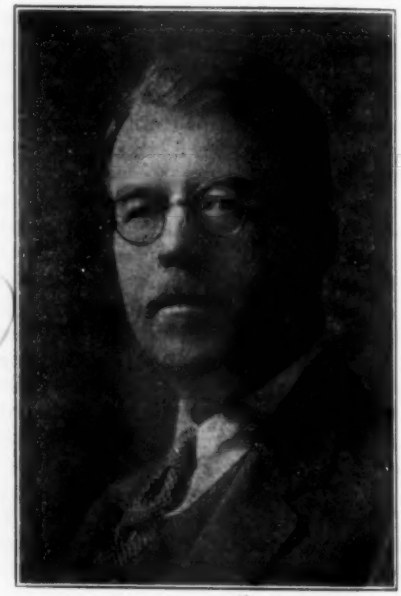
HOW TO USE GROUP TESTS OF INTELLIGENCE

By WALTER F. DEARBORN, Ph.D., M.D.

Professor of Education and Director of the Psycho-Educational Clinic
Graduate School of Education, Harvard University

Although group intelligence tests are used in practically every school system in the United States, their validity is often questioned. Dr. Dearborn, who has organized one of the most helpful group tests, tells us just how such tests should be used to assist teachers. He is a member of our Consulting Editorial Board.

IT IS commonly said that group tests of intelligence are less reliable than the individual intelligence examination. This is ordinarily the case, but I am not at all sure that it need be in many instances. If as much care and insight were given to the selection and training of examiners for the handling of group measurements as are now commonly given to the individual examiner's preparation, the difference in reliability would certainly be greatly lessened. It is often thought that any intelligent person can "give" a group test after he has read the directions, whereas months, if not years, of training are expected of the competent individual examiner. There is at any rate an extraordinary difference in the skill exhibited by various examiners in the management of groups of children under examination. I have observed, in rare instances to be sure, group examinations conducted with as reliable results as individual when an examiner with, let us say for lack of a better description, a "magnetic personality" was in *rapport* with every member of the group, as if he were sitting at the desk of each subject.



WALTER F. DEARBORN

The reliability of a test means, in this connection, the degree with which different forms of the same type of test, or the extent to which the repetition of the same test at different times, give concordant results. By "validity," on the other hand, is meant the degree to which a test actually measures what it purports to measure — in this instance, "intelligence." In the latter respect, group tests need not, and do not, suffer from any invidious comparisons with the individual tests. The test primarily intended for employment in group examinations can, of course, be given individually, and the validity be not thereby affected. Group tests have, in fact, greatly extended the amount of valid materials for intelligence testing and are increasingly used both as independent and as "check" measures in the examination of individuals. My own general intelligence examinations were devised with the intention of giving better recognition of the abilities of individuals whose intelligence is not so well

expressed through the more usual channels, such as the scholastic and more particularly verbal forms. For some individuals they certainly appear to provide more valid measures than the more scholastic and verbal type of examination, such as the Stanford Revision of the Binet tests.

The chief problem for both group and individual examinations is to provide sufficient materials to give adequate samplings of the abilities of the subjects under examination. Practically all the common measures in use, whether group or individual, could be bettered by provisions for wider samplings of the abilities sought. But time and expediency set their limitations. It is usually a question as to which is the more important — the test or the time. When it is a question of commitment to an institution of a borderline case, time and expediency may not count, and all the skill, experience, and test paraphernalia available will be called into play.

A dozen statements follow, which an associate and myself have jotted down as indicating some of the uses, and sometimes the misuses, of group intelligence tests. At least a baker's dozen more should be added to delimit properly the subject.

1. The use of group tests results in a great saving of time and expense, often making possible the testing of all the children in a school system, where only a limited number of individual tests could be given.

2. In cases where a pupil is ill at ease, perhaps on account of speech defect, when forced to confront a strange examiner alone, a group test may be more reliable than an individual test.

3. Group tests may be used to determine the intelligence level of groups, such as grades, schools, or towns.

4. Group tests are of aid in ability grouping.

5. Group tests are useful as an aid in locating those children who are not working up to their capacity and those who are being assigned tasks beyond their ability.

6. In comparing the educational achievement of different grades or schools, intelligence ratings, which may be obtained from group tests, are essential.

7. Group test results are often of aid in determining whether a failing pupil's difficulties lie in some specific disability, emotional attitude, or in a lack of general intelligence.

8. Group tests may also be of use with adults, given either as group or as individual tests. They are of aid in educational and vocational guidance, in personnel work, and in placement bureaus.

9. Group test results are an aid in determining which curriculum a given pupil should be advised to follow.

10. Another important function of the group tests is to pick out those pupils who should be further studied.

11. A group test score or I. Q., of course, cannot be taken as final. While in most cases an individual test is more reliable than a group test, no important decision should be made on a single measure, whether it be obtained from a group or an individual test.

12. Since group tests are much more widely used, and are generally less skillfully administered, the dangers of misuse and misinterpretation are greater. Except in the hands of trained psychologists, they should be held as, at best, mere "tests" or samplings, and as capable of indicating the presence, but not necessarily the absence, of the quality sought; that is to say, in general, the subjects may well be given credit for all the intelligence displayed, but the shortcomings revealed would, at the start, best be regarded by the lay examiner as indicative of the need of further searchings or samplings. Few teachers would regard a single failure or low attainment in an examination in arithmetic as final evidence of mathematical depravity. The same attitude is a safe one to cultivate in regard to intelligence measurements.

WHY CHILDREN FAIL IN READING

By WILLIAM S. GRAY, Ph.D.

Professor of Education, University of Chicago

Reading is the key to books and the foundation of academic learning. The teaching of reading therefore becomes one of the most important functions of the elementary school. For many years Professor Gray in his laboratory at the University of Chicago has been experimenting with children who could not read and his reports have been eagerly studied.

DURING recent years children who fail in one or more phases of reading have been reported in increasing numbers. This fact may be easily explained. First, teachers have assumed more responsibility for the welfare of each child; hence, they have become more sensitive to various kinds of difficulties which children encounter. Second, new standards of promotion have been adopted which make it possible to advance pupils before they have attained grade norms in all subjects; therefore, deficiencies in reading may become prominent at a given grade level, whereas formerly the pupil would have been retained in the preceding grade. Third, the enrichment of the course of study during the last decade has made it necessary for pupils to engage in many forms and applications of reading that were formerly not required; as a result, many deficiencies are exhibited today which were not noted in the past. Fourth, the teaching of reading in elementary schools has undergone radical changes recently. As often happens during periods of transition, certain phases of reading are neglected to a greater or less extent. It follows that the apparent increase in the number of pupils who fail in reading, or who exhibit serious deficiencies, is the natural result of important reforms, greater sensitiveness to individual achievements and needs, and increased demands made upon the child at each grade level for intelligent reading.

WILLIAM S. GRAY

What are the types of children who fail in reading? The teacher will find at least some of the following in her class:

Pupils who are normal or superior mentally and who make satisfactory progress in most school activities, but who are unable to read; i.e., the non-readers;

Pupils, known to be mentally deficient, who, for this and other reasons, have made little or no progress in learning to read;

Pupils who have made some progress in learning to read but who still have some difficulty in all phases of reading;

Pupils whose difficulties lie primarily in the mechanics of reading;

Pupils who have difficulty chiefly in the comprehension and interpretation of meaning;

Pupils whose rate of reading is faulty,

who read very slowly and haltingly, or who, on the other hand, read too rapidly to grasp meanings clearly.

What types of errors do these pupils make? Lack of space limits us to the mere mention of certain types of mistakes made in recognizing and pronouncing one-syllable words: total or partial mispronunciation (vowels, consonants, consonant blends, vowel digraphs, reversals), wrong articulation and enunciation, confusion or uncertainty when attacking new words.

A complete report of the errors made by pupils in reading would require an extended list of errors on monosyllabic words and also detailed descriptions of errors (a) in recognizing and pronouncing groups of words, (b) in recognizing the meaning of words and groups of words, (c) in comprehending and interpreting the meaning of sentences and paragraphs, (d) in reading and interpreting passages for different purposes, (e) in engaging in the various forms and applications of reading in different school subjects and activities, (f) in reading silently (errors with respect to rate), and (g) in reading aloud to others. It is apparent, therefore, that the number and types of errors and difficulties which pupils may experience is very great.

As the teacher discovers pupils who are failing in reading, what can she do about it? She can take steps at once to determine the kinds of errors which they make in both oral and silent reading and the nature of the difficulties they encounter. To this end two plans can be followed to advantage. The first is to give a group of reading tests which measure achievement in various phases of reading, such as rate and accuracy in oral reading, the meaning of words, the rate and comprehension of relatively simple and of more difficult paragraphs, and ability to read accurately for different purposes as measured at present by several diagnostic silent reading tests. The second, supplementing the information thus secured, is for the teacher to keep a daily record of the errors made and the difficulties encountered by the pupil in regular reading activities during the reading period, in the other school subjects and activities, and during the library or free reading hour. The importance of such records cannot be overemphasized. The writer has found them of equal, if not of greater, value than those secured in the laboratory. In order to make a complete record of errors and difficulties, the teacher will find it convenient to have a sheet of paper at hand for the purpose and not depend upon memory. As an important fact is noted, it should be recorded in detail so that its significance will be clear later. Such records are not only of great value in determining the nature of the deficiencies and needs of a pupil, but also in suggesting additional types of records to be secured through the use of reading and other types of tests.

While the teacher is studying the nature of the errors and deficiencies in reading, an effort should be made to determine their causes in individual cases. As an early step in this direction, a group or individual intelligence test should be given, preferably the latter. Previous studies have shown that mental retardation or deficiency is one of the prominent causes of failure in reading. It is important, therefore, to know at the outset whether a pupil who is failing in reading ranks below the average on an intelligence test. The fact that he may rank low does not mean that he cannot be taught to read; it does suggest, however, that the methods used in the regular reading class should be modified in teaching him to read. It was formerly thought that remedial training was of little value in the case of a pupil whose I.Q. was 70 or below. Experimentation during recent years has shown that satisfactory progress can often be secured if the I.Q. is not below 60 or the mental age below five years. A knowledge of the mental age of a pupil is also essential in the case of normal or superior pupils who can read very little or not at all. It aids greatly in defining the type of training which should be given.

In the study of the causes of reading deficiency, which should be continued until a satisfactory explanation has been found, what other steps can the teacher take? Besides an intelligence test, the ordinary tests of vision and hearing should be given. If deficiencies are suspected, the pupil should be referred to an eye or ear specialist. If a school psychologist is available, he should be asked to give auditory and visual memory tests. In the meantime, the child's home conditions and influences should be investigated. Such points should be noted as the amount of sleep he gets, his previous physical record, and evidences of malnutrition. Inquiry should be made as to emotional disturbances or tendencies and his out-of-school associates and activities. His whole school record, beginning with the first grade, should be looked up, with special reference to his progress in reading, the regularity of promotion, and any special peculiarities or difficulties he may have shown. This investigation can best be made through the coöperation of the classroom teacher, the visiting teacher, the school nurse, the school physician, and the school psychologist. At the conclusion of the study, the teacher should be able to define the character of the pupil's deficiencies and its causes in some such statement as the following: Harry, a second-grade boy, has made very little progress in learning to read; he is undernourished, is extremely nervous, and lacks interest in reading; his school history shows a change of school during his first school year, involving adjustment to a different reading method.

As soon as the nature of the deficiency and its probable causes have been determined, corrective and remedial training should be given. If there are several pupils whose needs are similar, group instruction may be given to advantage. If pupils differ widely in respect to their needs, they should be taught individually. To this end a special period should be reserved each day for remedial work. Whereas the tendency earlier was to secure a special remedial teacher for each school, the fact is recognized now that the responsibility for such training should be assumed largely by the classroom teacher who knows better than anyone else the deficiencies, needs, interests, and other characteristics of her pupils.

The training given should be specific and adapted to the special needs of the pupil. Only two examples can be included. The mentally retarded child requires, as a rule, much more stimulation, stronger appeal to interest, the development of a broader background of experience, the greater use of oral English in introducing a theme and in discussing the meanings of words, sentences, and longer units, the use of a larger amount of objective and visual material in connection with reading activities, greater effort in developing visual discrimination between words, and the provision of very simple and attractive material for independent reading. In the case of pupils of normal intelligence who have made little or no progress in learning to read, it has been found that the use of the kinaesthetic method, which involves the tracing and writing of words, is an aid in associating meanings and pronunciations with symbols.

A recent book, "Children Who Cannot Read," * is perhaps the most helpful source of suggestions relative to different types of deficient readers.

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* *Children Who Cannot Read*, by Marion Monroe. Chicago: University of Chicago Press. Pp. 205. 1932. $2.50.

Traditionally we think of school success in terms of marks, promotions, and graduation. Thus we often fail to realize that, fundamentally, the aim of education should be to fit the individual for success in his personal relations with his fellows. Everybody has a natural craving to adjust himself to life's difficulties in a way that is approved by his associates. Inability to do this leads to maladjustment and unhappiness.

— J. M. A.

CASE STUDIES

Every pupil must be dealt with according to his personality and environment. Nevertheless, knowledge about the successful handling of cases may be suggestive to all teachers.

How easily a child's life may be injured through serious reading disabilities! What a satisfaction it must be to child and teacher as normal progress is made! Mr. William L. Young, Ed.M., who is in charge of Educational Adjustment in the Brookline Public Schools and was formerly Principal of the Horace Mann School, Everett, Mass., tells a true story of discovery and achievement which should be of special interest to all elementary teachers.

THE CASE OF MARY

The Problem:

Mary F. was 13 years and 9 months old. She had repeated grade IV, but she had been absent for three months during the first year in that grade on account of illness. She was now repeating grade VI. Her attendance had been somewhat irregular, but her work habits were generally fair.

It was observed that when she read she held her head forward, and was apt to finger her dress, or rise on her toes and sway her body. She had poor sentence sense, and did not volunteer to take part in recitations; she was not loquacious and her answers were usually short. In talking, she pronounced simple words fairly well with normal fluency, and her inflection was fair. She wrote well, but slowly. Apparently she had no aversion to reading, but inability to read had undoubtedly handicapped her in the school subjects in which reading ability was essential. Her general comprehension seemed to be good and she had probably made school progress on account of her ability to learn through audition.

To find the causes and the nature of her disability meant expert investigation of many factors, including home conditions, general health, emotional experiences, general intelligence, special physical disabilities and all speech and reading difficulties.

What Was Found:

The home conditions were good. Mary's parents, brother, and two sisters were all congenial. Their attitude toward school was good. They spoke English well, except for many common errors in speech. All the children progressed through school slowly, but none had been serious control cases. The environment outside of school was normal.

Mary herself was well disposed toward life and had good intentions. She had never adjusted herself satisfactorily to the school situation, although she was sincere and coöperative. She was quite particular about her personal appearance, was self-conscious and hesitant, and was rather easily discouraged, but otherwise apparently normal in her emotional reactions. She liked a good deal of attention from her parents and teachers. She played normally with her schoolmates.

Her health habits were satisfactory on the whole, though she bit her nails. Her posture was good except when reading. On physical examination no ailments were found, and her eyesight and hearing were normal.

The Tests Used:

An average of several intelligence tests showed that Mary had a mental age of 12 years, 11 months, and an I.Q. of 94. Yet her educational age was 10 years, and her school accomplishment quotient only 78.

A whole battery of special tests was given to discover what she could do in the mechanics of reading, and the comprehension, retention, organization, appreciation, reproduction, and use of what she read.

By tests of her enunciation and pronunciation (Iota Word test, Gates' Graded

Pronunciation test, and others) it was found that she did not know and could not synthesize the long and short vowel sounds and their combinations, and had considerable difficulty with common consonant sounds. She often reversed the order of sounds, as in the case of "no" and "was," and sometimes substituted sounds, as in reading "going" for "doing," and "flow" for "blow."

In Gray's Oral Reading Paragraph test Mary did not do on the average quite as well as third-grade pupils. But in the Sangren-Woody Reading test she did about as well as third-grade pupils in rate, in fact material, in total meaning, and in central thought, and about as well as fourth-graders in word meaning, in following directions, and in organization. Her punctuation and spelling were at about fourth-grade level. Her reading age was 11 years by the Gates' Graded Pronunciation test.

In the test for complete recall she took nearly twice the normal time, but remembered well the things she understood.

Various tests showed that Mary was slow to get the meaning of words, which led to efforts to analyze them, instead of getting the whole content. These efforts led to much blinking, with irregular, non-rhythmic eye movements and fixations, and to pauses at the wrong places, and to jerky reading. Her ignorance of the meaning of words and her slow analysis caused her to take three times the normal time to complete the scanning test.

During the tests she appeared no less at ease in the presence of the examiner than she always had been in the classroom where she had an audience and was conscious of being observed. There were marked lip movements in both silent and oral reading tests; there were head movements from side to side. When words were difficult for her, she hesitated, moved her head forward, made associative movements of feet and fingers, and her body swayed forward and backward. When reading silently in her seat only lip movements were noticed.

To summarize, these tests showed that Mary had normal intelligence and good attention habits, that her general comprehension was better than her reading rate, that she had never mastered the fundamentals of primary reading, that she lacked knowledge of consonant and vowel sounds, that she had a tendency toward reversals, that she was slow to get the meaning of words, that lines above and below the one she was reading bothered her, especially in long paragraphs, that she lost paragraph content in trying to pronounce and understand the words, that she lacked confidence in her ability to read, that her associative body movements and the presence of an audience bothered her, and that her failures in other school subjects were due chiefly to her reading disability.

Evidently chances for improvement in reading ability were good, but a carefully planned corrective program was essential.

What Was Done:

Mary was told in a general way that she could learn to read well, that she had the stamina to apply herself, and that improvement in reading depended mainly upon her, that she was nearly two years behind her classmates in her ability to read, and that her work in other subjects would be much improved if she could read more intelligently.

The expert and the teacher planned with her a program of corrective work. Much individual help was obtained from an experienced, sympathetic teacher. Mary was given a thorough review of the mechanics of reading of the first three grades with much emphasis on phonics, consonant and vowel sounds. The elimination of lip movements was started at once. Action words were used first. She was required to perform the act as evidence of her comprehension. This was followed by matching colors with the names of the colors, and exercises using modifying words. The same plan was then used with sentences. Common reversals such as "saw" for "was"

were given special attention. To correct her slow analysis of common words, one-, two-, and three-syllable words were taught as units in connection with the phonics. These were then placed in phrases, clauses, and sentences, and learned as units for meaning, then in longer sentences followed by a paragraph for paragraph content. The tachistoscope (a laboratory instrument for exposing words or objects to view for short but accurately regulated times) was used for words, phrases, and clauses. This training quickened her power of analysis and unit comprehension and eliminated lip movements. Much attention was given to the meaning of words.

The training given in consonant sounds and seeing these consonants at the beginning and ending of words first, and then placed in the middle of the word, did much to correct reversals and to stop slow word analysis. When her attention was called to such errors as reading "flow" for "blow," she could often correct them, which proved that carelessness was a part of her difficulties.

Phrases exposed to her in fairly rapid succession followed by isolated full line sentences helped her to overcome the fault of returning to words for verification of pronunciation before continuing to read. A piece of cardboard with a rectangular opening large enough to allow only one line to be read at a time and moved down the page, first by the teacher and later by Mary, gave considerable help. This also eliminated the annoyance of being conscious of the lines above and below the one she was reading. She overcame these inhibitory associations through confidence of the knowledge of all words to be read.

The early drill paragraphs were composed of words familiar to her. Many of them were read over and over until she was confident she could read them correctly. The abnormal amount of blinking and other associative movements gradually disappeared as she gained confidence in ability to read. After mastering easy paragraphs of moderate length, she was given longer ones with slightly more difficult words. Paragraphs were read and reread under time pressure until satisfactory reading rate and fluency were gained. This plan was continued for twenty minute periods two or three times a day for several months. Mary kept a record of her progress and made weekly comparisons. She was checked on comprehension and advised how she rated.

When she met a long, unfamiliar word for the first time, she would analyze it for pronunciation, get its meaning, and use it correctly. This word was then added to the test for quick exposure and kept there until mastered.

She was required to read with the objective of asking the teacher questions on the content of what she was reading. The same paragraphs were used several times for additional thought and for speed under time pressure. This plan was continued until several paragraphs or pages were used instead of a single paragraph. These same paragraphs were used for practice in simple punctuation, first with punctuation and then without, and vice versa.

The Result:

Mary's progress was slow at first. It always is in improvable cases. She was given individual attention for one and one-half hours a day for nine months. At the end of that period her reading ability rated at the beginning of the sixth grade, still nearly one year behind her class, to be sure, but she has been happier in her school work and anticipates a much brighter future. Before the close of another year in school she can probably take her place as an average grade VII pupil.

Who can doubt but that her entire future has been positively influenced through a better knowledge of her difficulties and the adoption of a constructive plan of individual remedial instruction which is helping her to overcome her reading deficiencies so successfully?

PIONEERS *in* MENTAL HYGIENE

ALFRED BINET

The Pioneer of Mental Tests

By EDOUARD CLAPARÈDE, Ph.D.*

Professor in the Faculty of Science, University of Geneva
Director of the Journal *Archives de Psychologie*

The name of Binet is a byword throughout the schools of the country, but the American teacher knows little about his personal life. We are very fortunate to have a charming pen portrait of him by the distinguished Swiss psychologist, Professor Claparède, who knew Binet personally.

IT WAS in the winter of 1891–92 that I first saw Alfred Binet. I was then a young student nineteen years of age, and I had called at his little apartment in the rue Madame in Paris to consult him about a problem in which, at that time, we were both interested — the problem of colored audition [having an impression of color on hearing a sound]. Binet received me most kindly, and what first struck me about him was the sweetness of his voice, the inquisitive and laughing glance of his rather short-sighted eyes, and an enigmatic little smile. Later, when I knew him better, I learned to read what that countenance expressed — a mixture of curiosity, timidity, scepticism and irony, kindliness and gaiety.

What Binet disliked most was the pseudo-scientist, the charlatan, the man who jumps to the solution of a problem without recourse to experiment. It was always his first care to keep this type of person out of his laboratory. When a new pupil presented himself, Binet would give him a sheet of paper containing about a hundred questions which the candidate was required to answer, and would tell him not to come back until he had completely filled out the questionnaire. Usually the student did not come back. It was a good way of eliminating those who were not inclined to work.

How did Binet come to take up the study of intelligence tests?

He was born in Nice on July 11, 1857. He first studied law, but soon afterwards he went in for natural sciences and took his "license" in Science in 1890. He was especially interested in the investigation of hypnotism that Charcot was conducting at the Salpétrière, and he published two books on this subject, "Animal Magnetism" in 1886 and "Alterations of the Personality" in 1892. In 1889 when Beaunis opened a psychological laboratory at the Sorbonne, Binet went to work there, and in 1894 became Director.

What characterized Binet's psychology was its emphasis upon concrete reality. An interested observer of life, he occupied himself chiefly with the problems that lie close to life itself. While the Germans were studying the lower psychological phenomena (such as sensations), or the higher phenomena apart from their relation to everyday life (such as association, memory, and the like), Binet was studying mental activity in all its complexity and in relation to the

* Translated from the French by Elizabeth A. Foster, Ph.D., of Smith College.

ordinary circumstances of life. He conceived the idea of going to the schools and making studies upon the school children. What impressed him most while he was studying attention, memory, or sensitivity as measured by the esthesiometer, were the differences with which these phenomena manifested themselves in different individuals. He was especially interested in *intelligence*, taken as a whole, at a time when the word was never spoken among psychologists. Upon his two daughters he made numerous observations which showed the difference in their intellectual types.* Then he became much interested in the determination of the *physical signs* of intelligence.† His association with educational circles drew him naturally toward the problems of applied psychology. He would compare the results of his investigations on the pupils whom he had studied as subjects with the teachers' opinions of them. And more and more the problem of the measurement of intelligence occupied his mind.

But it was a fortuitous circumstance which in a way made Binet solve this problem. In 1904 he was appointed to a committee named by the Minister of Public Instruction to organize the teaching of the abnormal. By what objective method was one to recognize an abnormal individual? What criterion was one to adopt? It was then that Binet, in 1905, invented his famous "scale of intelligence," so full of genius in its simplicity.

Binet was not the first to have the idea of measuring mental functions by mental tests, but it was Binet who first made the idea practicable. Any quantity of tests had indeed been proposed before, but their authors had neglected to grade them or arrange them in a scale, with the result that these measuring instruments were quite incapable of measuring.

Genius usually consists in discovering a very simple idea which no one has thought of before. The idea, in this case, was to use ages to make the marks on the intelligence scale.

Everyone knows what a success this scale has had. Not in France, to be sure, for this is another instance of the truth of the old saying "A prophet is not without honor save in his own country." But in Switzerland, in Belgium, in England, and especially in the United States, Binet's tests have become well known, have been checked and perfected, and have suggested other series of tests.

Binet was an admirable research worker. The dominating trait of his scientific personality was his curiosity. He worked because he liked to, for the joy of discovering. He had no ulterior motives of interest. He never tried to get a remunerative position. He was content with his modest little fortune, which enabled him to give up his time, in complete independence, to his researches.

He wrote very clearly, in a picturesque and often amusing style, and with great rapidity. If I am not mistaken, his book on the experimental study of intelligence was composed in two weeks. "One of my greatest pleasures," he said to me one day, "is to have before me a blank sheet of paper to fill."

Another very marked characteristic of Binet was his gift of observation, his ingenuity in thinking up new experiments. He was an empiricist who distrusted *a priori* ideas. When anyone pronounced an opinion in his presence, he would answer: "That remains to be seen; it is possible, but have you tested it?" He was a fanatic on the subject of experimentation.

Although Binet considered that psychology ought to be completely separated from metaphysics, he did for several years work on the problem of the relations between mind and body. He criticized especially the hypothesis of psycho-physical parallelism, (see his book "Mind and Body," 1906),

Continued on page 30

* See his book on *The Experimental Study of Intelligence*, 1903.

† See numerous papers in the *Année psychologique* between 1899 and 1904.

NEW BOOKS

The books reviewed in this department are intended to guide teachers in their reading and buying, and to give the essential message of each book.

MARKS AND TESTS

IN A book* sufficiently stocked with facts, charts, and tables, Professor Dearborn has made a broad and critical survey of the widely-used intelligence tests, their relations to education, their limitations, and their values. What he said a few years ago is as valid now as it was then, for during the intervening time little change has taken place in the conditions under review.

Everyone makes some sort of judgments about his fellows. Teachers make judgments about their pupils. They express their judgments of a child's scholastic attainments by marks. But scholastic attainments depend on many factors, such as interest, industry, disposition, and so on, many of which enter into general intelligence, and so teachers' marks represent their judgment of a composite result.

Intelligence tests also measure a combination of several factors, some of which are the same as those included in teachers' marks, but are better standardized and are correlated with the child's age, while marks are correlated rather with his grade.

Many pertinent and searching comparisons are made between teachers' marks and the results of intelligence tests. Each contributes to the sizing up of the child as to his general ability and capacity, and to the estimation of his probable success in school, college, and after life.

Each method has its advantages and its limitations, into which the author goes at considerable length and in much detail. Each measures different things. Marks test chiefly the child's attainments in his studies, and usually require a special bit of knowledge recently acquired or learned, while tests call chiefly for ingenuity in the use of old and common knowledge, often in a new and somewhat unusual way, and so test his general intelligence, his inborn abilities. Yet when the results of marking and of testing are compared, they agree fairly well. Such differences as are found are due chiefly to failure to take account of certain of their respective limitations. In fact, marks are "the chief criterion by which the intelligence test is evaluated," and the author speaks of the "school system as in itself a great intelligence test."

Many tests, including some of the earlier ones, are briefly described, and fuller mention is made of those devised by Binet, who originated the concept of "mental age" (M.A.), from which the "intelligence quotient" (I.Q.) is derived by dividing the M.A. in months by the C.A. (chronological age) in months. The I.Q. in turn has made it possible to establish norms of development, with which the mental development of any child may be compared. It has been found that the I.Q. is nearly or quite the same in each child throughout his period of development, and this enables a fairly accurate prediction to be made in his early years as to the probability of his success in school and college.

Neither general intelligence tests nor teachers' marks indicate adequately a child's special mental abilities or disabilities. Special tests have been devised to fill in this gap. There is special need for them in the case of those children who have language disabilities, and those who are "concrete-minded" but whose general intelligence may be quite as high, measured by the positions held in after life, as that of

* *Intelligence Tests: Their Significance for School and Society*, by Walter F. Dearborn, M.D. Pp. xxiv, 336. Boston: Houghton Mifflin Company. 1928. $2.50.

persons whose linguistic attainments gave them higher school and college marks. Some interesting comparisons are made between school and college rankings of men who afterward became professors of physics or chemistry on the one hand and of modern and ancient languages on the other.

Professor Dearborn takes exception to some of the presuppositions and opinions held by many psychologists and others regarding intelligence tests. He takes the position, for example, that they do not test merely inborn or native ability, but that they necessarily involve and depend upon the experiences of the individual, the things he has learned and acquired both in school and in the community as well. It is the old problem of "nature versus nurture." He claims that neither tests nor marks can make the distinction between them.

He is also critical of the rather widely held opinion that intellectual endowment (nature) is fixed and unalterable, and that tests of intelligence in early years determine the limits of possible development. He holds that if both tests and the school curriculum were less overweighted with subjects concerning or dependent on language facility and attainments, many pupils' attainments and I.Q.'s would probably have a higher rating than now, not because of lower standards of markings or measurement, but because abilities now more or less neglected would be developed, used, and tested. He deprecates what he regards as the overemphasis on the language factor in the educational system, in the marking of pupils, and in the devising of tests. He advocates more emphasis on practical performance, and especially the use of special classes, in the school system. He also approves of more homogeneous grouping, on the basis of mental age, of pupils in classes.

He makes a plea for better provision in the school system for the dullard whose I.Q. ranges between 70 and 90 according to the tests now in use. Such pupils are often prodded to do things which they cannot do, and thus the school contributes to the difficulties of the normal dull, whom it should help.

The foregoing are but a few of the many interesting points brought out in this book. It is not one to pick up by way of entertainment in a leisure moment, but well repays study.

E. S. A.

DIAGNOSTIC AND REMEDIAL TEACHING

DURING the past ten years the development of testing has taken two divergent trends. On the one hand the technics in the use of tests for supervisory or administrative purposes have been refined and clarified; on the other hand the use of tests has been increasingly directed to facilitate the diagnostic and remedial aspects of teaching.

A text of exceptional excellence in the latter field is that entitled "Diagnostic and Remedial Teaching."* This is a volume that has a sane point of view. Sanity in dealing with a broad field and with a narrow technic is difficult to achieve because the narrowly conceived technic may carry an enthusiastic author into fields far removed from the specific problems of the classroom teacher. Throughout this book the technics for revealing the difficulties of the pupil and for correcting them have been emphasized and no attempt has been made to force upon teachers the nearly impossible, and usually uneconomic, task of making explanations of failure.

A characteristic of the text that will appeal to many teachers who desire to know more of their pupils is that the authors have included sufficient background

* *Diagnostic and Remedial Teaching*, by Leo J. Brueckner, University of Minnesota, and Ernest O. Melby, Northwestern University. Riverside Textbooks in Education Series, edited by Dean E. P. Cubberly. Pp. xviii, 598. Boston: Houghton Mifflin Co. 1931. $2.75.

materials to support adequately their later discussions of specific technics. Nearly one-fifth of the text is devoted to a clear-cut, broad, and not too brief review of the essentials of testing and of diagnostic technics.

A third excellence of the text is that it covers a wide range of subject matter. The emphasis is placed, as might be expected, on the school skills of reading, arithmetic, spelling, language, and handwriting. In addition, the authors include technics for diagnosis of results and remedial work in the social studies, in character education, and in health teaching. A significant omission may be noted in the absence of consideration of the aesthetic arts. It is true that there are few tests in these fields, but it is also true that there is as much or more possibility of diagnostic and remedial work in physical education, the fine arts, and in music as in the fields treated above. Moreover, if no tests were available at all, there yet remains the use of the valuable teacher-made classroom tests.

Within each field the authors have carefully worked out the technics that are possible through the use of the existing tests and scales. By studying the suggested procedures the classroom teacher should be able to find much profit as well as help in gaining a better knowledge of the difficulties of his pupils.

Two deficiencies stand out. The first difficulty is that the text, in each field, treats of specific technics involving in most cases many existing standard tests. As a result, increasingly as new tests are developed, the classroom teacher will be forced to make general adaptations of technics largely for himself. The second difficulty is more serious. Although the text devotes a chapter to the non-standard teacher-made objective test, little attention is paid to its obvious supplementary diagnostic and remedial values. In the opinion of many educators these values are high and should become greater in the years to come. These are minor criticisms that detract little from a most excellent and helpful text, one that should add much power to the work of a thoughtful teacher.

CHARLES RUSSELL, *President*
State Teachers College
Westfield, Massachusetts

A TOUR THROUGH MODERN PSYCHOLOGY

NEARLY everyone enjoys a tour. We step on board the great yellow bus in the spirit of adventure. The guide shouts through his megaphone "All aboard!" and we are off. There is a rapid change of scenery as we take to the open road. We travel so fast that the view is often blurred. Little effort is really demanded. We sink down into the soft cushions and enjoy comfort and entertainment. The tour is fascinating and exhilarating, but there is an invitation to think. Perhaps it comes to us as we speed on through sunlit fields or pause for a moment before an ancient cathedral. The spell of the journey lasts. A few vivid impressions remain. We are left with the slightly uneasy feeling that we might do some reading about the important points visited.

Such a tour is suggested by "Psychology Today," * a volume containing thirty lectures on psychology which were delivered by leaders of psychology under the auspices of the National Advisory Council on Radio Education. From the time that the first guide, James R. Angell, President of Yale University, takes charge until the end of the route the travelers are treated to an instructive and entertaining program. Dr. Angell whets the appetite of the readers as he says:

"Psychology is still in its early infancy and growing rapidly. What its future achievements may be, no one can confidently predict. But it is certain that anyone

* *Psychology Today: Lectures and Study Manual.* Edited by Walter V. Bingham. Pp. 271. Chicago: University of Chicago Press, 1932. $1.50.

who would approach sympathetically and intelligently the compelling problems of our time — economic, social, educational, religious, political, both national and international — will do so far more effectively for a knowledge of human nature such as modern psychology is able to provide."

The book is very carefully planned and edited. The lectures are organized in groups of five under six different headings: Psychology Today, Child Development, Our Changing Personalities, Animal Behavior, Psychology of Education, and Psychology and Industry. At the back of the book there are manuals for each set of five lectures. The manual contains a brief outline of each lecture, suggestions for study, and an annotated bibliography.

The reviewer experienced so many vivid impressions that he finds it difficult to generalize. As an example of what the book offers let us spend our time on one chapter. The lecture on "The Effects of Punishment and of Reward" by Edward L. Thorndike deserves more than passing notice. It has usually been thought that reward and punishment are opposites; that if a reward is attached to a particular tendency, that tendency is strengthened, and a punishment attached to it weakens it.

In the Institute of Educational Research of Teachers College Dr. Thorndike and his colleagues have been experimenting to find out just what rewards and punishments really do. As an example of the procedure used, Dr. Thorndike showed a person, who knew no Spanish at all, a Spanish word followed by five English words, one of these words being correct and the other four being wrong. As this person made a choice, he was rewarded if right and punished if wrong. This procedure was tried with 200 words in all. There were repetitions until many or all of the words were learned. A wide variety of experiments was conducted. Sometimes the reward was money; in other cases it was simply an announcement of right, that naturally tends to satisfy the person's pride and self-respect.

The remarkable conclusion of all these experiments is that punishments do no good. The person improves only because of rewards. "Rewarded right tendencies," says Dr. Thorndike, "always are strengthened by the reward; punished wrong tendencies are not weakened by the punishment. If they disappear, it is because a competing rewarded tendency becomes so strong that it supplants them." It makes no difference what the character of the punishment is, whether it be an electric shock or a fine, it does nothing beneficial. "Indeed, a wrong response," continues Dr. Thorndike, "although punished often, does more harm by occurring than it does good by being punished."

Under certain conditions Dr. Thorndike finds that punishment may be beneficial. If children or animals are punished for being in a certain place, they will learn if they are led to go elsewhere. To use punishment successfully one must know what the punishment will make the person do. If when a workman is punished by a foreman he avoids that mistake, it may be profitable, but if it makes the workman avoid reporting his mistakes or hate the foreman, it may do more harm than good. Punishment helps only when the learner is led to perform the right act.

The results of Dr. Thorndike's experiments become evident when we stop to consider how the world has relied upon punishment, perhaps as much as on reward, in education, in business, and in government.

In conclusion, Dr. Thorndike sums up his findings in these significant words: "*We found that much the best way to eradicate a bad tendency was to put a good tendency in its place and reward it. I believe we should try this oftener in homes, schools, industries and government.*" [Italics are editor's.]

Yes, it was an interesting and instructive tour. It is not expensive and it pays well for the effort expended. I recommend it.

J. M. A.

QUESTIONS AND ANSWERS

To be of greatest service to its readers this magazine will do its best to answer all questions submitted. It will publish some of the most pertinent questions and answers. Address your questions to the Editor of UNDERSTANDING THE CHILD, *3 Joy Street, Boston, Mass.*

Here are two important questions. One concerns class discipline, and the other complaining parents. Do you agree with these answers or have you other suggestions? Are there other questions that you would like to have discussed? Is this Department of the magazine helpful? The Editor would like to hear from you.

What suggestions may be given from the point of view of mental hygiene to a teacher who has lost disciplinary control of her class?

Answered by

MORRIS KRUGMAN, PH.D., Chief Psychologist
Bureau of Child Guidance, Board of Education, New York City

It is highly improbable that a teacher who has had control of her class will lose that control unless something serious has happened in her personal life either outside the school or in. A teacher who is undergoing emotional stress at home cannot help carrying some of the effects into the classroom. Different personalities, however, will differ in this respect, so that some people will go to pieces in a situation that will affect others only slightly. Obviously, mental hygiene calls for a clearing up of the causes of the disturbance, if that is possible. This will frequently take care of itself if the supervisor is sympathetic and patient, but if additional pressure is brought to bear by the administration of the school, conditions will, of course, become worse. Sometimes a close friend of the teacher can be utilized to bring to the surface the reasons for the difficulty, for they may be entirely unconscious. If this is attempted, it must be done very carefully and by an intelligent and sympathetic person who is rather intimate with the teacher. Such focusing of attention on the reasons for the unusual behavior sometimes brings about a better adjustment. If the teacher is not helped by this means, she should be advised to consult a psychiatrist. In doing so, the constructive personal and health benefits to her should be emphasized.

Sometimes the school situation itself brings about a serious strain on the emotional condition of the teacher. A new superintendent or principal may introduce sweeping changes over night, and not permit some of the teachers sufficient time for readjustment, or a particularly capable teacher may be overburdened with difficult assignments because of her ability to handle them, while less capable teachers are exempt from such assignments. Then there is the supervisor who may be requiring his staff to carry too heavy a load without obtaining their coöperation, thus causing antagonism, lack of interest, and even dislike for teaching, and resulting in a loss of morale and a consequent loss of disciplinary control. There is also the teacher who overworks of her own accord, teaching day school, evening school, and perhaps summer school. In addition, she may be carrying University courses. A teacher cannot go on doing this indefinitely without injury to her health and person-

ality, which, in turn, must affect her class control.

In general, the well-prepared teacher with a healthy, wholesome outlook on life is not apt to lose control of her class. It is as important for a teacher to practice the principles of mental hygiene in her own life as it is to teach them to children. It is necessary for her to be happy at her work and to realize how destructive it is to bring unhappy home problems or other disturbing personal situations into the classroom. It is necessary for her to have interests in addition to her teaching and to have sufficient time and opportunity for recreation. Needless to say, not all emotional problems are cleared up so simply. Disturbances attendant on economic insecurity, poor health, unhappy home situations, and the like, may be so serious as to leave a lasting influence on the personality of the teacher, but fortunately, cases that do not respond to a sympathetic and understanding approach are in the minority.

What suggestions are there for the teacher who is in constant dread of the few criticizing and complaining parents who are usually found in a school system?

Answered by

LOUIS MONASH, Principal, Public School 33, The Bronx, New York City

Author of "Know Your Child"

On the first day of the new term the well-groomed boys in their light-colored blouses presented a splendid appearance — all but Henry Frost, who wore a khaki blouse under his blue coat. The teacher asked him to remove his coat and he refused, saying, "My father doesn't want me to take my coat off."

The following day this letter arrived:

Mr. Principal:

To let you know why my son cannot remove his coat in school is because I do not want it done.

I dare to say that I have not brought my son up to be a *Parrot* or a *Parasite* and have not yet found any such rules that teacher or Principal can impose such demand as for a uniform to meet their personal notions.

Teach instead of finding faults with the clothing.

Respectfully,

ALBERT FROST

In every school there are a number of Mr. and Mrs. Frosts of whom the teachers are in constant dread. These parents come to school with a "my-child-right-or-wrong" platform. How can we change their attitude of adverse criticism to one of helpful coöperation?

To this end the wise teacher adopts a threefold plan. She "cleans house" professionally, determines to avoid raising issues, and learns a definite technique of interviewing angry parents.

A clear "educational conscience" is an effective antidote for such dread, so the teacher makes doubly sure that she is being fair and square, playing no favorites; that she is quick to say "That's good," or to smile approvingly at an evidence of improvement; that in preparing her lessons she thinks as definitely about Henry's predicament as about long-division; and that she knows her pupils' hobbies as well as she knows their educational quotients.

Prevention being better than cure, the teacher gives direct commands *sparingly*.

"Let's," or "Wouldn't you like to?" *prevents* disobedience!

In spite of all these endeavors she may expect that the parent with a grievance will still storm in. Then her first duty is to *listen* (unless the administrator does it for her); to listen not only calmly and patiently but with the eager yet impersonal interest of a physician listening to a patient's heartbeat, anxious to find out what is wrong that it may be set right. If underneath the tirade of anger and abuse and prejudice — all natural even if mistaken — some error of her own is disclosed, let her be quick to admit it.

After the parent has talked the matter all out, the teacher, with true respect for the parent's viewpoint, might say something like the following:

"I'm glad you told me about all this. I think I understand. Have you noticed, Mr. Frost, how greatly Henry has improved in his attack on his work lately? His gain in arithmetic has been greater than in any other year. Look at these papers — October and January! No, not up to the standard yet, but you see how important it is for him to beat his own past record.

"Now, the school has its own problems in being a school. Part of its job is to help Henry know more and live better, but it must accomplish the same end for a few hundred others and that's the reason why Henry cannot always be allowed to do what might seem to be the best thing for him if he were the only one to be considered. The makers of that rule about coats off had in mind the unhampered motions and the temperature adjustment which would be generally wisest for all the boys in school.

"You would be surprised how quickly we teachers can tell when the father has been praising the school to the child. The effect registers in the child's very face and work. If, for Henry's sake, you could often mention something you like about the school, I'll wager that he would improve even faster. Thank you! Good-bye, Mr. Frost."

And the teacher will not dread the *next* parent with a grievance.

ALFRED BINET

Continued from page 23

and we used to have long discussions of this subject. I always remember a certain night when we discussed, as we strolled through the deserted streets of the Latin Quarter, the external reality of the objects which surrounded us.

Binet, as I have said, was ironical. He showed great scorn for those who made statements which they had not checked, as sometimes happens among teachers. The latter, with the exception of the small group of the Society for the Psychological Study of the Child, were not very fond of Binet, whose investigations disturbed their quiet. I once heard a French inspector scoff at Binet's tests, saying that they asked the children absurd questions which had nothing to do with their class work! One must hope that this lack of understanding on the part of the teaching body of the work of a man like Binet will some day cease, and that his name will be honored not only by the psychologists, but also by all educators, for he is one of those who have best helped us to "understand the child."

His death, which occurred on October 18, 1911, was a great loss to Psychology.*

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* For further details about Binet, see my article on him in the *Archives de Psychologie*, Vol. XI, 1911.

If you have any difficulty in finding satisfactory answers to the questions on page 4, write to the Editor who will be glad to help you.

The next number of UNDERSTANDING THE CHILD, for January, 1933, will deal with adolescence and will include articles by Dr. Douglas A. Thom, Mrs. Sidonie M. Gruenberg, Maurice A. Bigelow, Fowler D. Brooks, and others.

NEWS

UNIVERSITY EXTENSION COURSES

THE Division of University Extension, of the State Department of Education, and the Massachusetts Society for Mental Hygiene are to conduct courses in mental hygiene as mentioned below. Detailed outlines of the courses, each of which consists of eight lectures, can be obtained by writing to the State Division of University Extension, State House, Boston. Registration may be made either at the first lecture or at the office of the Division.

Boston. *Human Nature and Society.* Wednesdays, at 7.45 P.M., at the Old South Meeting House, beginning October 19.
Lecturer: Dr. Abraham Myerson.

Cambridge. *Normal Youth and Its Everyday Problems.* Mondays, at 7.30 P.M., at Harvard Hall, Harvard University, beginning October 24.
Lecturers: Dr. Douglas A. Thom, Dr. Samuel W. Hartwell, and Dr. Henry B. Elkind.

Fall River. *Mental Hygiene of Childhood and Adolescence.* Tuesdays, at 7.15 P.M., the Public Library, beginning November 1.
Lecturers: Miss Martha Chandler, Miss Ruth M. Faulkner, Miss Elizabeth W. Amen, and Miss Sybil Foster.

Reading. *Practical Mental Hygiene.* Tuesdays, at 7.30 P.M., at the High School, beginning October 25.
Lecturer: Dr. Samuel W. Hartwell.

The Annual Meeting of the Massachusetts Society for Mental Hygiene will be held on Tuesday, November 15, 1932, at the Twentieth Century Club, 3 Joy Street, Boston, beginning with a luncheon at one o'clock.

Dr. Walter F. Dearborn, one of our Consulting Editors and distinguished for his work at the Harvard Graduate School of Education, will speak on the topic "Made That Way." Dr. Abraham Myerson, Professor of Neurology, Tufts College Medical School, and widely known as a practicing psychiatrist and author, will discuss "Sanity in Mental Hygiene."

Tickets for the luncheon at $1.00 per plate may be secured by writing to the Massachusetts Society for Mental Hygiene, 3 Joy Street, Boston, or one may come without charge to the speaking after the luncheon.

MENTAL HYGIENE PRECEPTS

Cultivate Courage

Timidity, fearfulness, lack of self-confidence indicate need of mental hygiene.

Seek Self-Control

not by

repression of hate, fear, anger, love and other emotions

but by

diversion of these emotions into other channels through wholesome activity.

Live in the World of People

Avoidance of others, inability to adapt to groups, lack of thought for others, prevents the cultivation of mental hygiene.

Develop Serenity

Confusion in work, play and study; conflict of ambitions with achievements; conflict of thoughts and feelings lead to lack of mental health.

Use Your Mind

The exercise of the mind is as important to mental hygiene as physical exercise to physical hygiene.

Live Life

Escaping from unpleasant situations through evading them, building up defenses, avoiding life, is poor mental hygiene.

Keep Well

Mental health is related to physical health.

Train Your Child Early

Tantrums, jealousy, whining, finicky eating, irregular sleeping, lack of toilet habits, overdependence, indicate need of mental hygiene.

—From the Illinois Society for Mental Hygiene

Subscription Policy of Understanding the Child

Understanding the Child is being published for the public school teachers of Massachusetts. It is their magazine and will cost them nothing. School physicians, school nurses, members of school committees, school superintendents, and the faculties of State normal schools will be sent the magazine without charge. Members of the Massachusetts Society for Mental Hygiene may also receive it free on request.

To insure that the publication cost of this new magazine will not interfere with the policy of sending it free to every public school teacher in Massachusetts, it becomes necessary to make a small charge to all others of $1.00 for a year's subscription of four numbers.

Special rates on bulk subscriptions will be given on request.

Note to Readers:

Our Editorial Office Staff has gone to much trouble to compile a mailing list which should include every public school teacher in the State of Massachusetts. We want to be sure, however, that our list is accurate — that every teacher is receiving this magazine and that all the addresses we are using are correct. We shall be very grateful if you will use the attached form to notify us of any change of your address, or to inform us of a teacher who is not receiving the magazine.

To THE MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE
3 Joy Street, Boston, Massachusetts

Please send Understanding the Child to:

Check one: Change of Address ☐ Non-recipient of Magazine ☐

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THOUGH INTELLIGENCE is an asset in life, it does not by any means include all the assets, nor does lack of intelligence cover all the deficiencies of one's equipment for life. The emotions need to be considered, the health and energy of the individual, his persistence, poise, sociability, and many characteristics which go to make up his "personality."

— ROBERT S. WOODWORTH